

강원 농경지 토양 화학성 변화

□ 배경 및 필요성

- 과학적인 토양분석을 바탕으로 적정한 비료 사용량을 추천하고, 지속가능한 농경지 보전과 효율적인 작물 재배 도모 필요

□ 정보 내용

- pH 평균은 밭, 과수원, 시설 6.3~6.4, 논 토양 6.0에 분포하여 적정범위
- EC는 적정범위 내에 있으나 증가 추세, 시설은 5.7 ds m⁻¹까지 상승
- 유기물, 교환성 양이온 함량은 시설>과수원>밭>논의 순이었고 증가 추세
- 유효인산은 논을 제외하고 적정범위를 초과하여 800 mg kg⁻¹이상
- 논토양의 규산 함량은 적정 범위이나 부족한 논의 비율도 50% 이상
- 도내 농경지 비옥도 평균은 전반적으로 적정범위이나 항목별 과부족률도 30~90%에 이르러 비료사용 및 토양관리 교육 지속적 필요

토지 이용형태	pH	EC	OM	Av.P ₂ O ₅	Ex. cations (cmol _c kg ⁻¹)			Av.SiO ₂
	1:5	ds m ⁻¹	g kg ⁻¹	mg kg ⁻¹	K	Ca	Mg	mg kg ⁻¹
논	6.0	0.34	26	143	0.25	5.3	1.1	167
밭	6.4	1.00	32	829	0.89	6.7	1.5	-
과수원	6.4	0.76	36	802	1.20	7.2	2.0	-
시설	6.3	5.72	44	1,194	1.94	12.8	3.4	-
적정범위 (시설)	6.0~7.0	≤2.0	20~30 (25~35)	300~550	0.5~0.8	5.0~6.0	1.5~2.0	>157

【토지 이용형태별 토양화학성 평균('22~'25)】

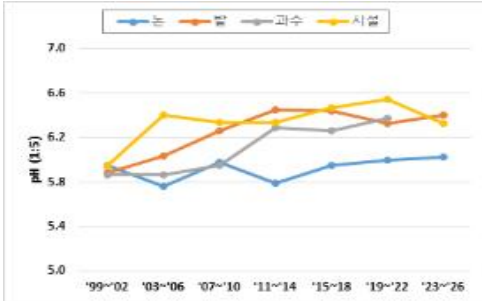
□ 파급효과

- 비옥도 변화를 통한 정책사업 추진 및 교육자료로 이용
- 농업의 환경보전적 공익기능 제고 및 안정적 농산물 공급체계 수립

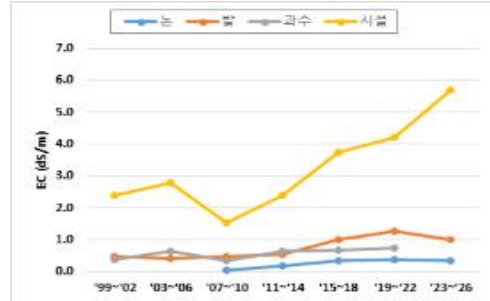


세부 연구결과

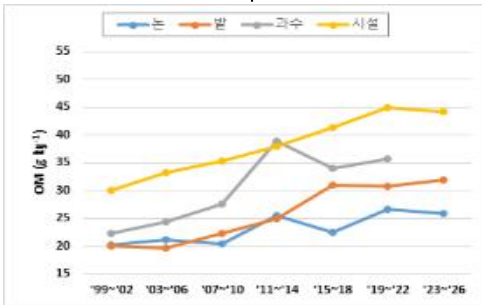
○ 도내 농경지 비옥도 변화('99~'25)



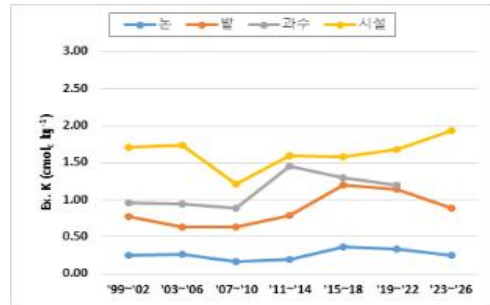
【산도(pH)】



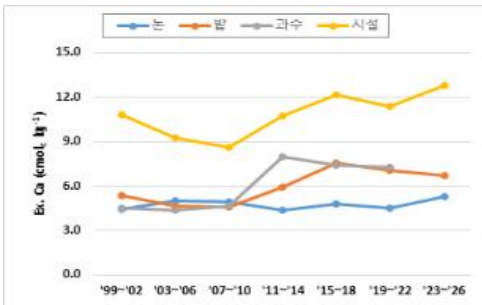
【전기전도도(EC)】



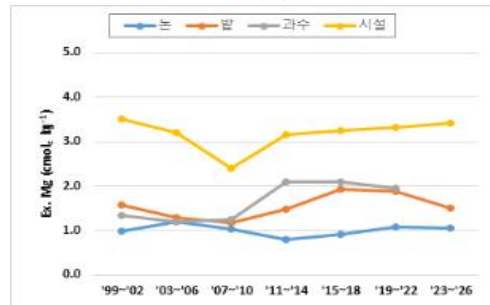
【유기물(OM)】



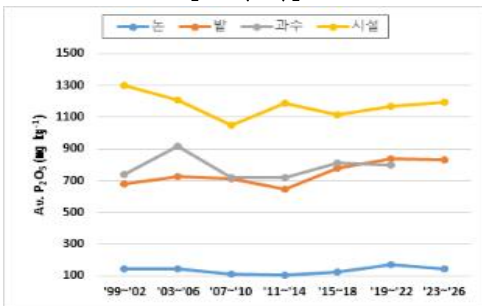
【칼리(K)】



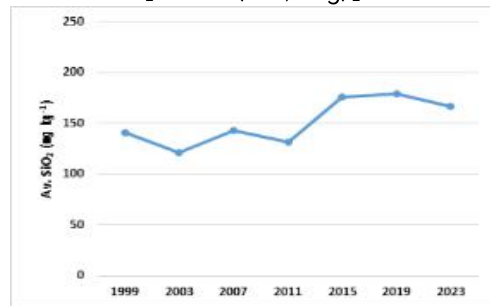
【칼슘(Ca)】



【마그네슘(고토, Mg)】

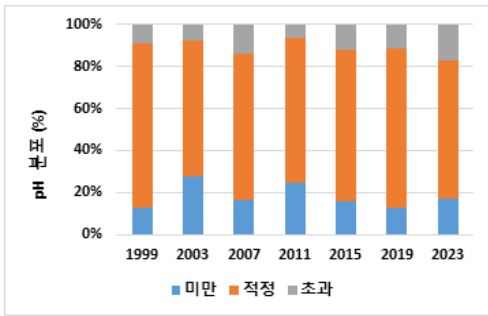


【인산(P₂O₅)】

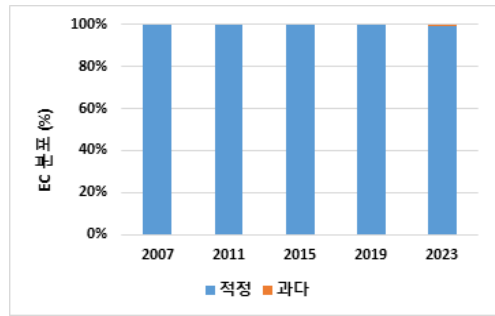


【규산(SiO₂)】

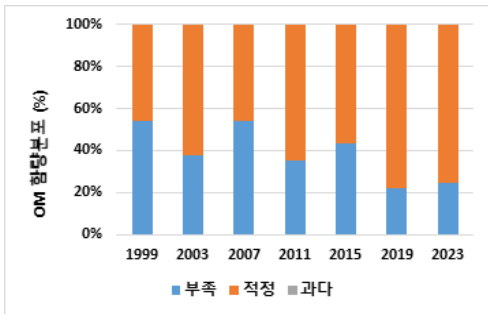
○ 논 토양의 화학성 과부족 분포비율 변화



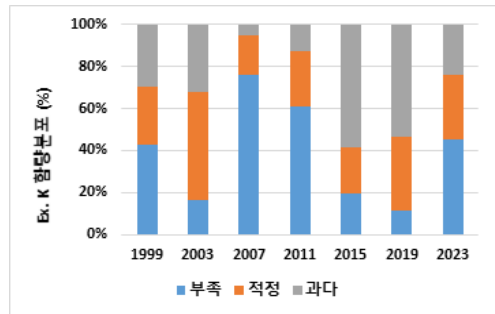
【산도(pH)】



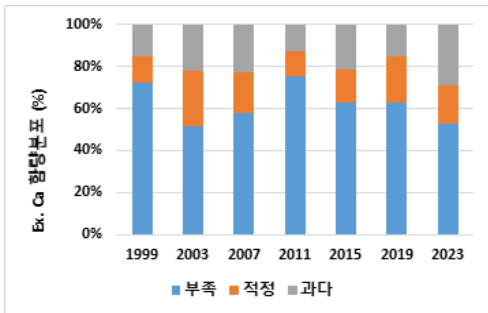
【전기전도도(EC)】



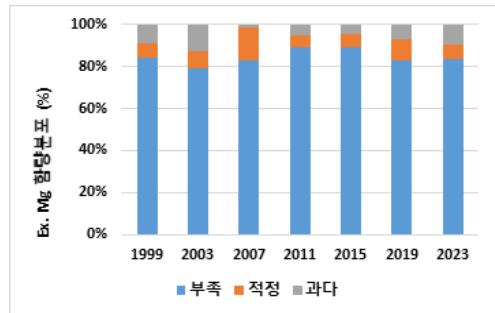
【유기물(OM)】



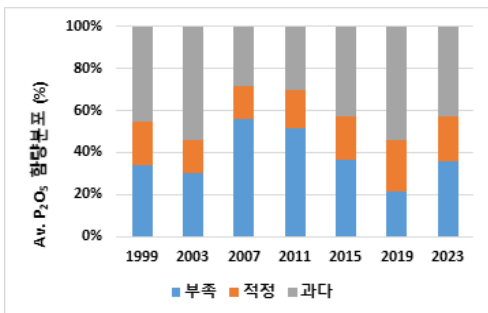
【칼리(K)】



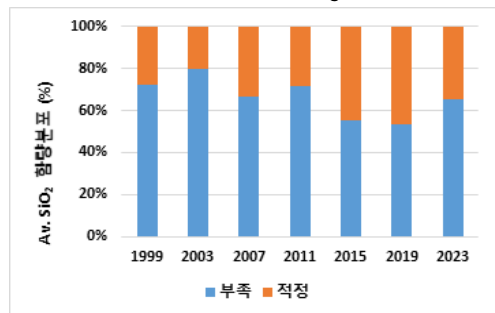
【칼슘(Ca)】



【마그네슘(고토, Mg)】

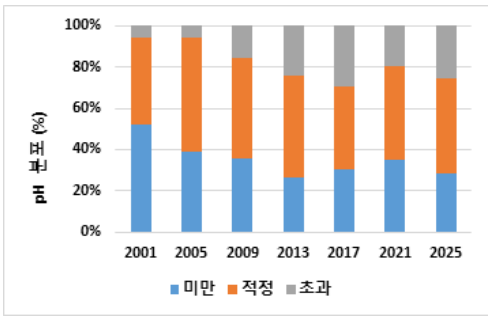


【인산(P₂O₅)】

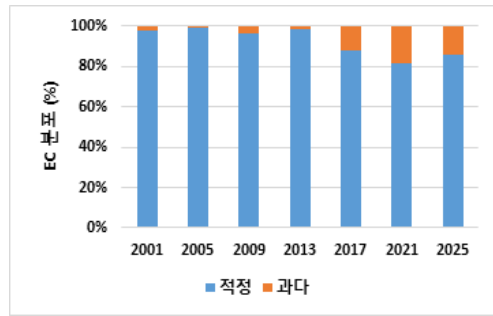


【규산(SiO₂)】

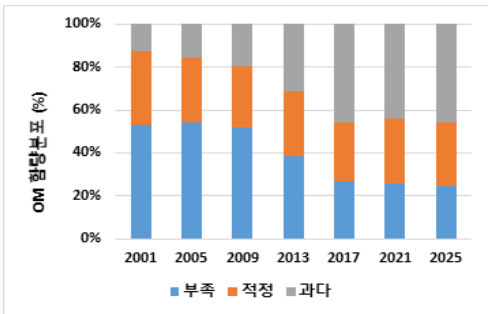
○ 밭 토양의 화학성 과부족 분포비율 변화



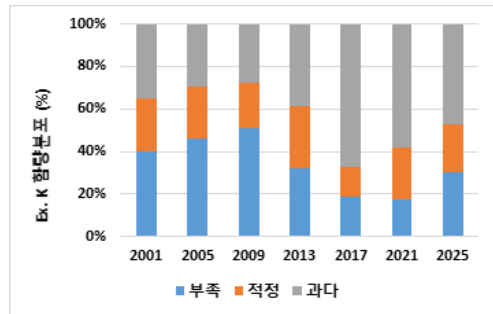
【산도(pH)】



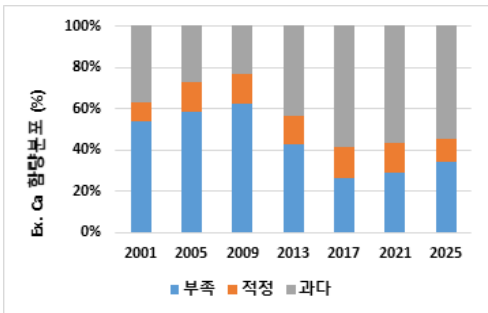
【전기전도도(EC)】



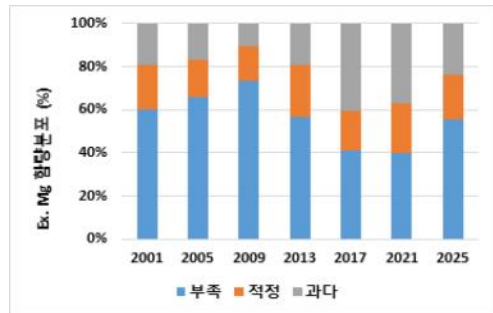
【유기물(OM)】



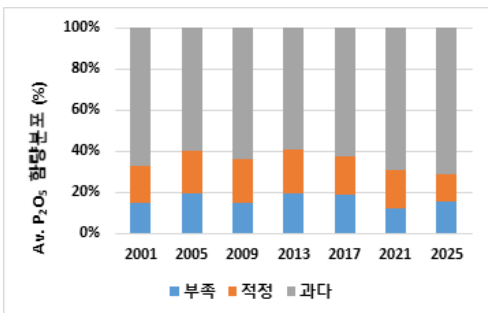
【칼리(K)】



【칼슘(Ca)】

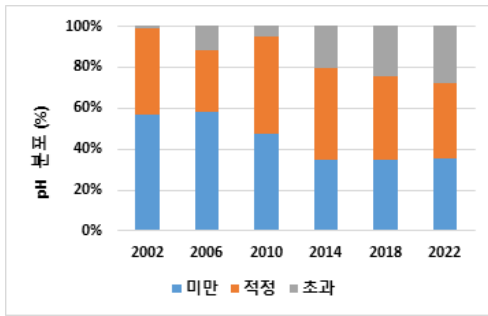


【마그네슘(고토, Mg)】

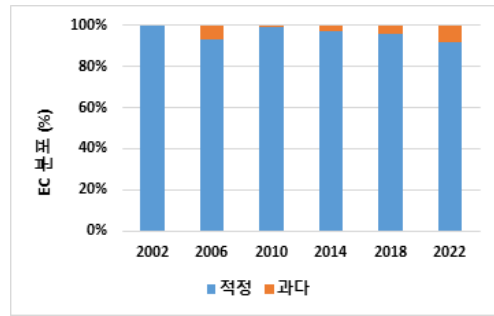


【인산(P₂O₅)】

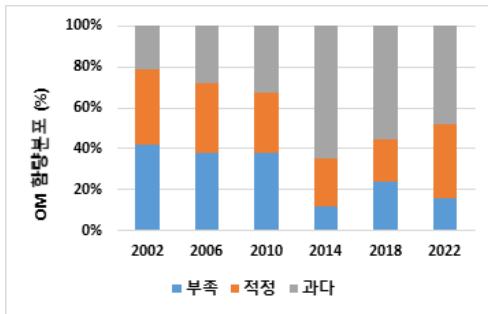
○ 과수원 토양의 화학성 과부족 분포비율 변화



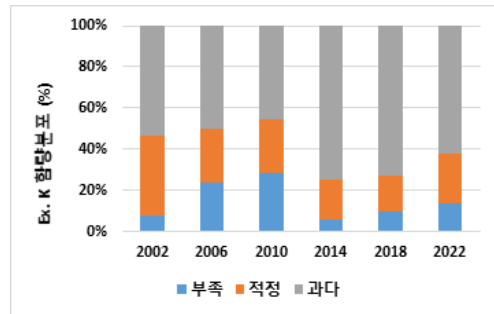
【산도(pH)】



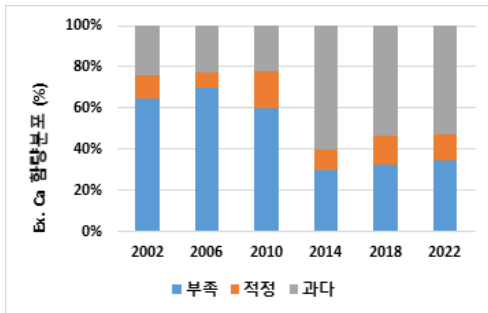
【전기전도도(EC)】



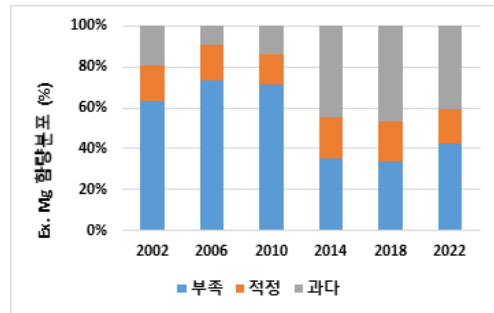
【유기물(OM)】



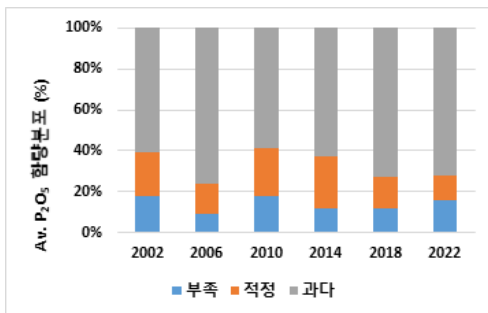
【칼리(K)】



【칼슘(Ca)】

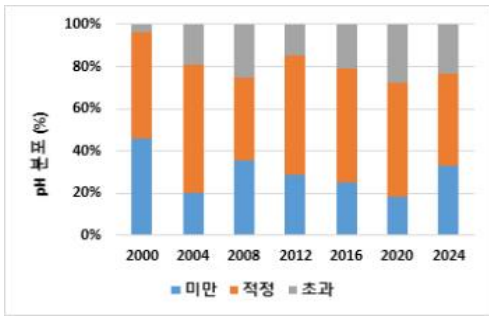


【마그네슘(고토, Mg)】

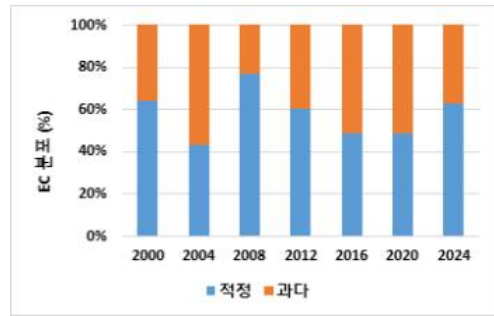


【인산(P₂O₅)】

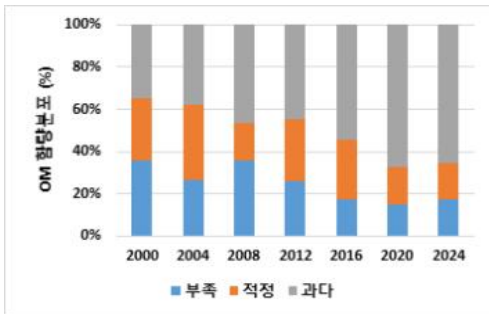
○ 시설재배지 토양의 화학성 과부족 분포비율 변화



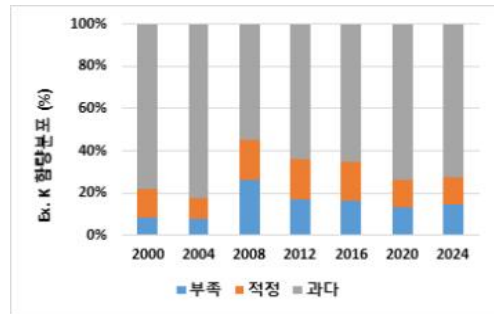
【산도(pH)】



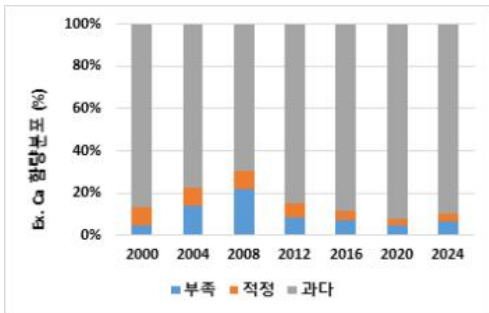
【전기전도도(EC)】



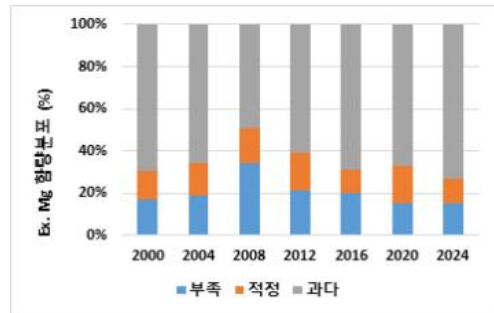
【유기물(OM)】



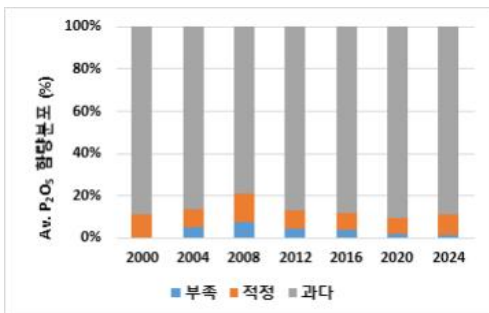
【칼리(K)】



【칼슘(Ca)】



【마그네슘(고토, Mg)】



【인산(P₂O₅)】